

1 **ABSTRACT OF THE DISCLOSURE**

2 A power redundant power system and a method for controlling the
3 power system are presented, wherein the power system is composed of at least
4 one inverter for supplying AC power to a load through a bus, a phase lock system
5 to synchronize all output voltages of the inverters and a current sharing circuit to
6 properly distribute the load current among all inverters. Each inverter is
7 controlled by an unbalanced power to limit the increase of its cross current.
8 Moreover, the information related to DC bus voltage is further applied to control
9 the inverters, whereby the cross current is mitigated and entire power system is
10 operated steadily.